

CLAIMS

What is claimed is:

1. An acoustic seal system, comprising:
 - a flexible sealing element having a ridge for engaging a cover
 - 5 with a first sealing interference fit;
 - a plate, wherein said flexible sealing element is secured to said plate; and
 - a mesh for controlling particulate contamination, wherein said mesh is secured to said plate;
 - 10 wherein said plate and at least a portion of said flexible sealing element are secured to a portion of an inner housing, said portion of said flexible sealing element engages the portion of the inner housing with a second sealing interference fit;
 - wherein when the cover engages the inner housing, said flexible
 - 15 sealing element provides an acoustic seal between the cover and the inner housing.
2. The system according to claim 1, wherein said plate includes at least one acoustic port for directing acoustic waves, said acoustic ports
- 20 corresponding to acoustic ports in the inner housing.
3. The system according to claim 2, wherein said flexible sealing element includes an opening, said opening exposing at least a portion of said plate and shaped to follow an outline of said acoustic ports of said plate.

4. The system according to claim 1, wherein said flexible sealing element has a top surface, said ridge being positioned on said top surface.

5. The system according to claim 1, wherein said plate is secured
5 to the portion of the inner housing with an adhesive.

6. The system according to claim 1, wherein said mesh is secured to said plate with an adhesive.

10 7. The system according to claim 1, wherein said flexible sealing element is constructed of at least one of rubber and plastic.

8. The system according to claim 1, wherein said plate is constructed of a rigid material.

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9. The system according to claim 8, wherein said rigid material is metal.

10. The system according to claim 1, wherein the inner housing
20 includes a first cavity having a first cavity surface and a first cavity wall.

11. The system according to claim 10, wherein said flexible sealing element includes an edge, said edge engaging the first cavity wall with the

second sealing interference fit, wherein said plate is secured to the first cavity surface.

12. The system according to claim 1, wherein a speaker is secured
5 to a second cavity surface of a second cavity of the inner housing with an
adhesive and wherein said plate at least partially directs acoustic waves
emanating from the speaker.

13. The system according to claim 1, wherein said flexible sealing
10 element is molded onto said plate.

14. An acoustic seal system, comprising:
- a flexible sealing element;
 - a plate, wherein said flexible sealing element is secured to said plate; and
 - 5 a mesh for controlling particulate contamination, wherein said mesh is secured to said plate;
 - wherein said plate and at least a portion of said flexible sealing element are secured to an inner housing;
 - wherein when the inner housing engages a cover, said flexible
 - 10 sealing element is also secured to the cover thereby creating an acoustic seal between the inner housing and the cover.